

What we claim is:

1. An isolated p42 nucleic acid encoding a p42 polypeptide, wherein said p42 nucleic acid is preferentially recognized by an *Agrobacterium*-mediated plant expression system thereby resulting in increased translation of the mRNA transcribed from said p42 nucleic acid.
2. The nucleic acid of Claim 1, wherein the sequence of said isolated p42 nucleic acid has been modified to remove potential poly-adenylation sequences, cryptic intron splice sites and RNA instability sequences, thereby resulting in enhanced RNA transcription and stability.
3. The nucleic acid of Claim 2 comprising an NtMSP1.42C nucleic acid wherein the codons encoding the upstream signal sequence of said NtMSP1.42S have been substituted by codons encoding a consensus sequence for ribosomal binding and a translation initiation site.
4. The nucleic acid of Claim 3 comprising nucleotide sequences from 1 through about 1149 of SEQ ID NO: 3.
5. An *Agrobacterium*-mediated plant expression system for the production of p42 polypeptide comprising a DNA construct consisting of operatively linked DNA coding for a modified T-region but no vir-region, wherein said modified T-region comprises naturally occurring border sequences consisting of about 23 nucleotides at the extremities of said modified T-region and wherein the p42 nucleic acid of Claim 1, the p42 nucleic acid of Claim 2, or the NtMSP1.42C nucleic acid of Claim 3, is flanked by said border sequences.
6. A dicotyledonous plant comprising the *Agrobacterium*-mediated plant expression system of Claim 5.
7. The dicotyledonous plant of Claim 6 wherein said dicotyledonous plant comprises a *Nicotiana tabacum* plant.
8. The dicotyledonous plant of Claim 6 wherein said expression system further comprises a suitable selection marker.

2011098514-034102

9. The dicotyledonous plant of Claim 8 wherein said suitable selection marker comprises a kanamycin resistance gene.

10. A method for production of a p42 polypeptide, comprising the steps of:

- introducing an *Agrobacterium* strain into a plant cell wherein said *Agrobacterium* strain comprises at least one plasmid having the vir-region of a tumor-inducing plasmid but having virtually no T-region, and at least one other plasmid comprising the modified T-region of Claim 5 but having no vir-region, wherein said plant cell becomes transformed; and
- extracting said p42 polypeptide from said transformed plant cell.

11. The extracted p42 polypeptide of Claim 10 comprising amino acid sequences from 1 through about 383 of SEQ ID NO: 2 or amino acids from 1 through about 383 of SEQ ID NO:4

12. The method of Claim 10 wherein said *Agrobacterium* strain is *Agrobacterium tumefaciens* strain LBA4404.

13. An isolated NtMSP1.42S polypeptide wherein said polypeptide is encoded by a nucleic acid sequence comprising sequences from one 1 through about 1149 of SEQ ID NO:1.

14. The isolated NtMSP1.42S polypeptide of Claim 13 comprising amino acid sequences from 1 through about 383 of SEQ ID NO: 2.

15. An isolated NtMSP1.42C polypeptide wherein the upstream signal sequence of p42 or NtMSP1.42S polypeptide has been substituted by codons encoding a consensus sequence for ribosomal binding and a translation initiation site.

16. The isolated polypeptide of Claim 15 comprising amino acids from 1 through about 383 of SEQ ID NO:4.

10098514.034010